



## Real World Effectiveness in Response to Biologics

This is a real world effectiveness of biologic study in one center at University of Rochester. So it's based on their experience. Obviously, this was a descriptive study, looking at data from 112 patients who are either started on biologic or switch to a biologic. So if they'd been on biologic before, and there were 83 patients who have not been previously treated with a biologic, and the rest were... which were 29 patients, were switched from a different biologic. And so, the investigators here, they wanted to look at determinants of response and whether... They define response by looking at exacerbation reduction, lung function improvement as a control. And they classify these patients into responders versus non-responders.

Most of their patients, the majority of patients, 43% were on Mepolizumab and 19% were on Omalizumab and 27% were on Dupilumab. And then the rest were on other NTI-5s. And they looked at responders versus non-responders. And then their take home message was that they presented experience that the majority of patients that started on biologic responded well by decreasing exacerbation and improving asthma control, which is what you expect.

The response, however, was less robust in patients who were previously on a different biologic and were switched. And the variables that were associated with poor response were having a female sex, lower baseline lung function, and a former smoking history. So that's another study where former smoking history may affect response in this population. Obviously, it's a descriptive study. It really puts more questions and answers that maybe there are some patients out there that don't respond to even switching biologic, and they may have a different type of asthma that needs further evaluation.

What this study tells us is that one, it's reassuring because in real world, it looks like biologic work in a majority of patients, but there are some subgroup of patients that you may not see a response. And we know that from Gina and other recommendation, you really need to give it time. It's not like a one shot. And you want to wait at least three months, four months to see the response. If it's intermediate response, continue for six to 12 months. That's what Gina recommends. But it sounds like there is a subgroup of patient in real life even if you switched them to a different biologic, they may have attenuated response. And in that sub population, one has to maybe dig deep into am I treating the right phenotype? Is there [inaudible 00:03:21] for more than one biologic they didn't look at this year. They looked at switching. There are some case reports there were using more than one biologic, working through a different mechanism, but that's not being evaluated in a large trial yet.